

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

1-47. (Canceled)

48. (Withdrawn) A method of making a blood pool selective oil-in-water emulsion comprising the steps of:

- (a) preblending the lipophilic components of an oil-in-water emulsion including nonpolar lipids, polar lipid emulsifiers, and other lipophilic components to form a premixed lipid phase;
- (b) homogenizing the premixed lipid phase and aqueous components to form a crude oil-in-water emulsion; and
- (c) subjecting the crude oil-in-water emulsion to ultra high energy mixing to produce a fine oil-in-water emulsion having a mean particle diameter of the oil phase between 50 to 150 nm with greater than 98% of the particles being less than 250 nm.

49. (Withdrawn) The method of claim 48 comprising the further step of:  
subjecting the fine oil-in-water emulsion to sequential filtering.

50. (Canceled)

51. (New) A surface-modified lipoprotein-like oil-in-water emulsion having a lipophilic core surrounded by a monolayer of amphiphilic or polar lipids, in a non-ionic aqueous phase, the emulsion having a mean particle diameter of the oil phase of between 50 to 150 nm with at least 98% of the particles being between 50 to 250 nm, the lipophilic core including at least one pharmacologically inert nonpolar lipid and at least one lipophilic contrast agent, and the monolayer including an emulsifier, a derivatized polyethylene glycol, and a sterol.

52. (New) The oil-in-water emulsion of claim 51 wherein the lipophilic core comprises up to 50% (w/v) of the total emulsion composition.

53. (New) The oil-in-water emulsion of claim 52 wherein the lipophilic core comprises between about 10% and 40% (w/v) of the total emulsion composition.

54. (New) The oil-in-water emulsion of claim 51 wherein the at least one lipophilic contrast agent is a water-soluble contrast agent derivatized with a lipophilic moiety.
55. (New) The oil-in-water emulsion of claim 51 wherein the at least one lipophilic contrast agent is a pharmaceutically acceptable nonpolar lipid.
56. (New) The oil-in-water emulsion of claim 55 wherein the pharmaceutically acceptable nonpolar lipid is a triglyceride.
57. (New) The oil-in-water emulsion of claim 56 wherein the triglyceride is a biocompatible oil of animal or vegetable origin.
58. (New) The oil-in-water emulsion of claim 56 wherein the triglyceride is a synthetic or semi-synthetic lipid.
59. (New) The oil-in-water emulsion of claim 58 wherein the triglyceride is a halogenated triglyceride.
60. (New) The oil-in-water emulsion of claim 59 wherein the triglyceride is 2-oleoylglycerol-1,3-bis[7-(3-amino-2,4,6-triodophenyl)heptanoate].
61. (New) The oil-in-water emulsion of claim 51 wherein the pharmacologically inert nonpolar lipid is triolein.
62. (New) The oil-in-water emulsion of claim 51 wherein the ratio of pharmacologically inert nonpolar lipid to contrast agent ranges from about 0.1:1.0 to 2:1 on a weight to weight basis.
63. (New) The oil-in-water emulsion of claim 62 wherein the ratio of pharmacologically inert nonpolar lipid to contrast agent is 1:1 on a weight to weight basis.
64. (New) The oil-in-water emulsion of claim 51 wherein up to 10% (w/v) of the emulsion is an amphipathic or polar lipid.
65. (New) The oil-in-water emulsion of claim 64 wherein the amphipathic or polar lipid is an emulsifier.
66. (New) The oil-in-water emulsion of claim 65 wherein the emulsifier is a natural, synthetic, or semi-synthetic phospholipid.

67. (New) The oil-in-water emulsion of claim 66 wherein the phospholipid is synthetic or semi-synthetic.
68. (New) The oil-in-water emulsion of claim 67 wherein the phospholipid is dioleoylphosphatidylcholine.
69. (New) The oil-in-water emulsion of claim 66 wherein the phospholipid is soy lecithin.
70. (New) The oil-in-water emulsion of claim 51 wherein up to 5% (w/v) of the emulsion is a sterol.
71. (New) The oil-in-water emulsion of claim 70 wherein the sterol is cholesterol.
72. (New) The oil-in-water emulsion of claim 70 wherein between about 0.4 to 0.5% (w/v) of the emulsion is a sterol.
73. (New) The oil-in-water emulsion of claim 72 wherein the molar ratio of cholesterol to emulsifier is between 0.05 to 0.70.
74. (New) The oil-in-water emulsion of claim 51 wherein the emulsion further includes a up to 5% (w/v) of an osmolality adjusting agent.
75. (New) The oil-in-water emulsion of claim 74 wherein the osmolality adjusting agent is anhydrous glycerol.
76. (New) The oil-in-water emulsion of claim 51 further comprising a sufficient amount of an antioxidant to inhibit oxidation of the emulsion.
77. (New) The oil-in-water emulsion of claim 76 wherein the antioxidant is  $\alpha$ -tocopherol.
78. (New) The oil-in-water emulsion of claim 51 wherein the derivatized polyethylene glycol comprises a linked lipid.
79. (New) The oil-in-water emulsion of claim 51 wherein the emulsion comprises up to about 5 % (w/v) derivatized polyethylene glycol.
80. (New) The oil-in-water emulsion of claim 79 wherein the derivatized polyethylene glycol comprises between about 0.1 and 30 mole percent of the monolayer components.

81. (New) The oil-in-water emulsion of claim 79 wherein the derivatized polyethylene glycol is selected from the group consisting of MPEG-linked phosphatidylethanolamine, MPEG-2000-1,2-distearoyl and MPEG-2000-1,2-dioleoyl phosphatidylethanolamine.
82. (New) The oil-in-water emulsion of claim 79 wherein the derivatized polyethylene glycol comprises a methoxy polyethylene glycol moiety having a molecular weight between about 1000 and 6000.
83. (New) A method of computerized tomographic imaging comprising the steps of:
  - a) administering an imaging amount of the oil-in-water emulsion of claim 51 to a mammal, wherein said lipophilic core of the oil-in-water emulsion comprises a computerized tomography imaging agent; and
  - b) when the imaging amount of the oil-in-water emulsion has reached the site to be imaged, carrying out computerized tomographic imaging of the site.
84. (New) A surface-modified lipoprotein-like oil-in-water emulsion having a lipophilic core surrounded by a monolayer comprising up to about 10% (w/v) of an amphiphilic or polar lipid, in a non-ionic aqueous phase, the emulsion having a mean particle diameter of the oil phase of between 50 to 150 nm with at least 98% of the particles being between 50 to 250 nm, the lipophilic core including at least one lipophilic agent, and the monolayer including an emulsifier, a derivatized polyethylene glycol, and a sterol.
85. (New) The oil-in-water emulsion of claim 84 wherein the lipophilic core comprises up to 50% (w/v) of the total emulsion composition.
86. (New) The oil-in-water emulsion of claim 85 wherein the lipophilic core comprises between about 10% and 40% (w/v) of the total emulsion composition.
87. (New) The oil-in-water emulsion of claim 84 wherein the at least one lipophilic agent is a water-soluble contrast agent derivatized with a lipophilic moiety.
88. (New) The oil-in-water emulsion of claim 84 wherein the at least one lipophilic agent is diagnostically or therapeutically active.
89. (New) The oil-in-water emulsion of claim 84 wherein the at least one lipophilic agent is diagnostically active.

90. (New) The oil-in-water emulsion of claim 84 wherein the at least one lipophilic agent is therapeutically active.
91. (New) The oil-in-water emulsion of claim 84 wherein the at least one lipophilic agent is a pharmaceutically acceptable nonpolar lipid.
92. (New) The oil-in-water emulsion of claim 91 wherein the pharmaceutically acceptable nonpolar lipid is a triglyceride.
93. (New) The oil-in-water emulsion of claim 92 wherein the triglyceride is a biocompatible oil of animal or vegetable origin.
94. (New) The oil-in-water emulsion of claim 92 wherein the triglyceride is a synthetic or semi-synthetic lipid.
95. (New) The oil-in-water emulsion of claim 94 wherein the synthetic or semi-synthetic lipid is triolein.
96. (New) The oil-in-water emulsion of claim 94 wherein the triglyceride is a halogenated triglyceride.
97. (New) The oil-in-water emulsion of claim 96 wherein the triglyceride is 2-oleoylglycerol-1,3-bis[7-(3-amino-2,4,6-triiodophenyl)heptanoate].
98. (New) The oil-in-water emulsion of claim 84 wherein the lipophilic core comprises at least one pharmacologically inert nonpolar lipid and a lipophilic contrast agent.
99. (New) The oil-in-water emulsion of claim 98 wherein the lipophilic core comprises at least one pharmaceutically acceptable nonpolar lipid and the contrast agent is a halogenated triglyceride.
100. (New) The oil-in-water emulsion of claim 98 wherein the ratio of pharmacologically inert nonpolar lipid to contrast agent ranges from about 0.1:1.0 to 2:1 on a weight to weight basis.
101. (New) The oil-in-water emulsion of claim 100 wherein the ratio of pharmacologically inert nonpolar lipid to contrast agent is 1:1 on a weight to weight basis.
102. (New) The oil-in-water emulsion of claim 84 wherein the amphipathic or polar lipid is an emulsifier.

103. (New) The oil-in-water emulsion of claim 84 wherein the emulsifier is a natural, synthetic, or semi-synthetic phospholipid.
104. (New) The oil-in-water emulsion of claim 103 wherein the phospholipid is synthetic or semi-synthetic.
105. (New) The oil-in-water emulsion of claim 103 wherein the phospholipid is soy lecithin.
106. (New) The oil-in-water emulsion of claim 104 wherein the phospholipid is dioleoylphosphatidylcholine.
107. (New) The oil-in-water emulsion of claim 84 wherein up to 5% (w/v) of the emulsion is a sterol.
108. (New) The oil-in-water emulsion of claim 107 wherein the sterol is cholesterol.
109. (New) The oil-in-water emulsion of claim 107 wherein between about 0.4 to 0.5% (w/v) of the emulsion is a sterol.
110. (New) The oil-in-water emulsion of claim 109 wherein the molar ratio of cholesterol to emulsifier is between 0.05 to 0.70.
111. (New) The oil-in-water emulsion of claim 84 wherein the emulsion further includes up to 5% (w/v) of an osmolality adjusting agent.
112. (New) The oil-in-water emulsion of claim 111 wherein the osmolality adjusting agent is anhydrous glycerol.
113. (New) The oil-in-water emulsion of claim 84 further comprising a sufficient amount of an antioxidant to inhibit oxidation of the emulsion.
114. (New) The oil-in-water emulsion of claim 113 wherein the antioxidant is  $\alpha$ -tocopherol.
115. (New) The oil-in-water emulsion of claim 84 wherein the derivatized polyethylene glycol comprises a linked lipid.
116. (New) The oil-in-water emulsion of claim 84 wherein the emulsion comprises up to about 5 % (w/v) derivatized polyethylene glycol.

117. (New) The oil-in-water emulsion of claim 116 wherein the derivatized polyethylene glycol comprises between about 0.1 and 30 mole percent of the monolayer components.
118. (New) The oil-in-water emulsion of claim 116 wherein the derivatized polyethylene glycol is selected from the group consisting of MPEG-linked phosphatidylethanolamine, MPEG-2000-1,2-distearoyl and MPEG-2000-1,2-dioleoyl phosphatidylethanolamine.
119. (New) The oil-in-water emulsion of claim 116 wherein the derivatized polyethylene glycol is methoxy polyethylene glycol having a molecular weight between about 1000 and 6000.
120. (New) A surface-modified lipoprotein-like oil-in-water emulsion having a lipophilic core surrounded by a monolayer of amphiphilic or polar lipids, in a non-ionic aqueous phase, the emulsion having a mean particle diameter of the oil phase of between 50 to 150 nm with at least 98% of the particles being between 50 to 250 nm, the lipophilic core including at least one lipophilic radiologic contrast agent, and the monolayer including an emulsifier, a derivatized polyethylene glycol, and a sterol.
121. (New) The oil-in-water emulsion of claim 120, wherein the lipophilic core comprises up to 50% (w/v) of the total emulsion composition.
122. (New) The oil-in-water emulsion of claim 121, wherein the lipophilic core comprises between about 10% and 40% (w/v) of the total emulsion composition.
123. (New) The oil-in-water emulsion of claim 120, wherein said contrast agent is selected from a group consisting of an X-ray contrast agent, a CT contrast agent, and an MRI contrast agent.
124. (New) The oil-in-water emulsion of claim 121, wherein said contrast agent is an X-ray contrast agent.
125. (New) The oil-in-water emulsion of claim 121, wherein said contrast agent is a CT contrast agent.
126. (New) The oil-in-water emulsion of claim 121, wherein said contrast agent is an MRI contrast agent.
127. (New) The oil-in-water emulsion of claim 120, wherein said contrast agent is a water-soluble contrast agent derivatized with a lipophilic moiety.

128. (New) The oil-in-water emulsion of claim 120, wherein said contrast agent is a pharmaceutically acceptable nonpolar lipid.
129. (New) The oil-in-water emulsion of claim 128, wherein the pharmaceutically acceptable nonpolar lipid is a triglyceride.
130. (New) The oil-in-water emulsion of claim 129, wherein the triglyceride is a synthetic or semi-synthetic lipid.
131. (New) The oil-in-water emulsion of claim 130, wherein the triglyceride is a halogenated triglyceride.
132. (New) The oil-in-water emulsion of claim 131, wherein the triglyceride is 2-oleoylglycerol-1,3-bis[7-(3-amino-2,4,6-triiodophenyl)heptanoate].
133. (New) The oil-in-water emulsion of claim 120, wherein up to 5% (w/v) of the emulsion is a sterol.
134. (New) The oil-in-water emulsion of claim 133, wherein between about 0.4 to 0.5% (w/v) of the emulsion is a sterol.
135. (New) The oil-in-water emulsion of claim 134, wherein the sterol is cholesterol and the molar ratio of cholesterol to emulsifier is between 0.05 to 0.70.
136. (New) The oil-in-water emulsion of claim 120, wherein the emulsion further includes up to 5% (w/v) of an osmolality adjusting agent.
137. (New) The oil-in-water emulsion of claim 136, wherein the osmolality adjusting agent is anhydrous glycerol.
138. (New) The oil-in-water emulsion of claim 120, further comprising a sufficient amount of an antioxidant to inhibit oxidation of the emulsion.
139. (New) The oil-in-water emulsion of claim 138, wherein the antioxidant is  $\alpha$ -tocopherol.

140. (New) The oil-in-water emulsion of claim 120, wherein the derivatized polyethylene glycol comprises a linked lipid.
141. (New) The oil-in-water emulsion of claim 120, wherein the emulsion comprises up to about 5 % (w/v) derivatized polyethylene glycol.
142. (New) The oil-in-water emulsion of claim 141, wherein the derivatized polyethylene glycol comprises between about 0.1 and 30 mole percent of the monolayer components.
143. (New) The oil-in-water emulsion of claim 141, wherein the derivatized polyethylene glycol is selected from the group consisting of MPEG-linked phosphatidylethanolamine, MPEG-2000-1,2-distearoyl and MPEG-2000-1,2-dioleoyl phosphatidylethanolamine.
144. (New) The oil-in-water emulsion of claim 141, wherein the derivatized polyethylene glycol is methoxy polyethylene glycol having a molecular weight between about 1000 and 6000.
145. (New) The oil-in-water emulsion of claim 120, wherein the emulsifier is soy lecithin.
146. (New) The oil-in-water emulsion of claim 120, wherein the lipophilic core further comprises at least one triolein moiety, and the monolayer comprises dioleoylphosphatidylcholine, MPEG-2000-1,2-dioleoyl phosphatidylethanolamine and cholesterol.